

Claims

1. A device for promoting decomposition of body fat and enhancing muscular strength, comprising:
 - a base seated on a horizontal surface;
 - 5 a post uprightly provided in the front part of the base; a foothold mounted to be vertically movable on the base, on which a user rests his feet;
 - a drive unit provided in the base in order to periodically and alternately raise and lower the opposite ends of the foothold; and
 - 10 a control section provided on the post for controlling the drive of the drive unit,

wherein the drive unit comprises a drive source mounted on the base, rotational shafts, which are respectively connected to driving axes extending from the opposite sides of the drive source, balance weights each being secured to one of the rotational shafts, which extend through the balance weights, eccentric axles each being directly formed on one of the rotational shafts, and connecting rods each being connected to one of the eccentric axles.
2. The device according to claim 1, wherein the foothold is abutted at the center part between the left and right ends thereof, and the connecting rods are connected to fastening means secured to each end of the foothold, so that the connecting rods afford periodic seesaw movements to the foothold.
3. The device according to claim 1, wherein the eccentric axles formed on the rotational shafts and connected to the connecting rods have a phase difference of 180° between them, so that if one of the eccentric axles is positioned at the uppermost position, the other is positioned at the lowermost position while the rotational shafts are rotating.
4. The device according to claim 1, wherein the rotational diameter of the connecting rods connected to the eccentric axles of the rotational shafts is in the range of 1 to 14 mm, and the rotational speed of the

connecting rods is in the range of 1 to 60 cycles/sec.

5. The device according to claim 1, wherein the control panel controls the vibrational speed in the range of 30 to 60 Hz at high-speed vibrational exercise mode, and controls the vibrational speed in the range of 1 to 29 Hz at low-speed vibrational excise mode.

6. A device for promoting decomposition of body fat and enhancing muscular strength, comprising:
10 a base seated on a horizontal surface;
a post uprightly provided in the front part of the base;
a foothold mounted to be vertically movable on the base, on which a user rests his feet;
a drive unit provided in the base in order to periodically and alternately raise and lower the opposite ends of the foothold; and
15 a control section provided on the post for controlling the drive of the drive unit,

20 wherein the drive unit comprises a drive source mounted on the base, couplings connected to driving axes extending from the opposite sides of the drive source, joint members residing between the couplings in order to reduce noise and friction, rotational shafts connected to the joint members, balance weights each secured to one of the rotational shafts which extend through the balance weights, eccentric axles each being directly formed on one of the rotational shafts, and connecting rods each being directly connected to one of the eccentric axles.

25 7. The device according to claim 6, wherein each coupling is formed from two toothed gears, which are mated with each other thereby transferring rotational movements.

8. The device for promoting decomposition of body fat and enhancing muscular strength, comprising:
30 a base seated on a horizontal surface;
a post uprightly provided in the front part of the base;

a foothold mounted to be vertically movable on the base, on which a user rests his feet;

5 a drive unit provided in the base in order to periodically and alternately raise and lower the opposite ends of the foothold; and

10 a control section provided on the post for controlling the drive of the drive unit,

15 wherein the drive unit comprises a drive source mounted on the base, rotational shafts connected to driving axes extending from the opposite sides of the drive source, eccentric cams each eccentrically secured to one of the rotational shafts, bearings each fitted around one of the eccentric cams, housings each fitted to enclose one of the eccentric cams, foothold connection parts connected to the foothold, length-controlled tie rods each extending between one of the housings and one of the foothold connection parts and screwed to the housing and the foothold connection part at its opposite ends, and anchoring nuts for securing the adjusted lengths of the tie rods connected to the housings and foothold connection parts.

20 9. The device according to claim 8, wherein the foothold is abutted at the center part between the left and right ends thereof, and the connecting rods are connected to fastening means secured to each end of the foothold, so that the connecting rods afford periodic seesaw movements to the foothold.

25 10. The device according to claim 9, wherein the fastening means comprises connecting means and left and right brackets.

11. The device according to claim 9, wherein one of the left and right brackets provided with securing holes extending in a predetermined length so that the connecting means is movable in the widthwise direction of the bracket.

30 12. The device for promoting decomposition of body fat and enhancing muscular strength, comprising:

a base seated on a horizontal surface;

- a post uprightly provided in the front part of the base;
- a foothold mounted to be vertically movable on the base, on which a user rests his feet;
- 5 a drive unit provided in the base in order to periodically and alternately raise and lower the opposite ends of the foothold; and
- a control section provided on the post for controlling the drive of the drive unit,
- 10 wherein the drive unit comprises a drive source mounted on the base, rotational shafts connected to driving axes extending from the opposite sides of the drive source, eccentric discs each secured to one of the rotational shafts, eccentric axles each being formed one of the eccentric discs, and connecting rods each directly connected to one of the eccentric axles.
13. The device according to claim 12, wherein each of the eccentric axles, to which connecting rods are connected, is formed on one of the eccentric discs at a position below the connection part between the eccentric disc and the rotational shaft, directly on the connection part between the eccentric disc and the rotational shaft, or at a position above the connection part between the eccentric disc and the rotational shaft.
14. The device according to claim 12, wherein the rotational diameter of the connecting rods respectively connected to the eccentric axles of the eccentric discs is in the range of 1 to 14 mm, and the rotational speed of the connecting rods is in the range of 1 to 60 cycles/sec.